

PATENT CLAIMS

1. A rolling door (1) having a door leaf (3) which can be rolled up, having a vertical roller casing (2) for accommodating the door leaf (3), having a sliding bar (4) which can be displaced in the horizontal direction and on which the roll-up door leaf (3) is fastened, and having a horizontal guide rail (10) which is located at the top and in which the sliding bar (4) is mounted in a displaceable manner, characterized in that the roller casing (2) is fastened on a wall by way of its rear side (17) or its outer side (15), and the guide rail (10) is designed as a free guide rail (10) which is fastened, on one side, at least indirectly on the roller casing (2) and, on the other side, in a holder (11) attached in least indirectly to a wall.

2. The rolling door (1) as claimed in claim 1, characterized in that the guide rail (10) is designed as a hollow profile, a pulling carriage (39) with running rollers (40, 41) preferably being mounted in a displaceable manner in the hollow profile, and the hollow profile also preferably having exclusively a slot (48) which is open in the downward direction and through which the pulling carriage (39) is connected to the sliding bar (4).

3. The rolling door (1) as claimed in claim 2, characterized in that the guide rail (10) is configured as a tube of essentially circular cross section, and the pulling carriage (39) has at least one pair, in particular preferably two pairs arranged one behind the other, of running rollers (40, 41) which are arranged to the sides of the pulling carriage (39), have a curved running surface (42) and on which inner surfaces of the tube which are present alongside the slot (48) run.

4. The rolling door (1) as claimed in either of claims 2 and 3, characterized in that a motor (36) for displacing the sliding bar (4) is arranged in or on the roller casing (2), and in that this displacement takes place via a spindle (32) which is driven by the motor (36), is preferably arranged in the interior of the guide rail (10), engages in at least one internal thread in the pulling carriage (39) and, in particular, on the side which is directed away from the roller casing (2), is preferably mounted in the holder (11).

5. The rolling door (1) as claimed in one of the preceding claims, characterized in that, furthermore, a counter-profile (8) is arranged on that side of the door which is located opposite the roller casing (2), in that this counter-profile (8) is fastened on a wall, and in that the counter-profile (8) is designed for stopping the sliding bar (4) when the door is closed, in particular the holder (11) for the guide rail (10) preferably being designed as a top covering for this counter-profile (8) and being connected firmly thereto.

6. The rolling door (1) as claimed in one of the preceding claims, characterized in that a switch (9) for the contactless operation of the rolling door (1) is arranged on the roller casing (2), preferably on its inner side (16), which is arranged perpendicularly to the plane of the door leaf (3), in particular this switch (9) preferably being designed as a single switch which activates the motor (36) logically in each case in dependence on the position of the door leaf (3).

7. The rolling door (1) as claimed in one of the preceding claims, characterized in that the sliding bar (4) has a mechanism (45, 51-53) which allows the sliding bar (4) to tilt if, when the rolling door (1) is being closed, an obstacle is located in the inside width of the door.

8. The rolling door (1) as claimed in one of claims 2 to 6 and claim 7, characterized in that the mechanism is designed as a bar or fork (45) which is arranged vertically and connected rigidly to the pulling carriage (39) and is attached to the sliding bar (4) via a pivot pin (51) arranged perpendicularly to the door leaf (3), the pivot pin (51) being arranged in the top third of the sliding bar (4), and means (52, 53) preferably being provided for fixing the sliding bar (4) in a vertical position and for releasing the same such that it can be rotated about the pin (51) only when a certain leverage about this pin is exceeded.

9. The rolling door (1) as claimed in one of the preceding claims, characterized in that the roller casing (2) contains a roller body (28) onto which the roll-up door leaf (3) is rolled, the roller body (28) containing a torsion spring such that, when the door leaf (3) is being closed, it is unwound from the roller body counter to the spring force, and the energy built up in the process is sufficient for rolling up the door leaf (3) onto the roller body (28) again, without any further motor power, when the rolling door (1) is opened.

25

10. The rolling door (1) as claimed in one of the preceding claims, characterized in that the wind-up door leaf (3) or the roller body (28) is exchangeable, and in particular is preferably formed from an at least partially textile woven fabric.

11. Use of a rolling door (1) as claimed in one of claims 1 to 10 as straightforward interior shutters, for example shutters for furniture and pieces of equipment, as a toilet door, a door for changing cubicles, talk booths such as phone booths, as photo booths, or as a partition door in or on public transport.

12. A method of installing a rolling door (1) as claimed in one of claims 1 to 10, characterized in that the roller casing (2) is fastened on a wall on one side of the door opening, in that the guide rail (10) and,
5 if appropriate, the spindle (32) are cut to a length corresponding to the inside width of the door opening, and in that the holder (11) or, if appropriate, the counter-profile (8), on which the holder (11) is fastened, is fastened on the other side of the door
10 opening, the guide rail (10) and, if appropriate, the spindle (32) being fastened between the roller casing (2) and holder (11).